



U.S. Patent Application Serial No. 10/711,941
Reply to OA dated June 28, 2006

Listing of Claims:

Claim 1 (Previously Presented): A method of evaluating positioning accuracy of a magnetic head tester that tests a performance of a magnetic head by carrying out write and read operations on a magnetic medium using a magnetic head that is a tested product, comprising steps of:

acquiring a plurality of GAPS profiles by repeatedly carrying out a GAPS test that measures a GAP offset amount for a same magnetic head that has been attached to the magnetic head tester; and

calculating a GAP offset fluctuation amount from the acquired plurality of GAPS profiles and setting a calculation result thereof as an index for evaluating a position reproducibility for the magnetic head,

wherein the GAP offset fluctuation amount is equal to a GAP offset maximum value minus a GAP offset minimum value.

Claim 2 (Previously Presented): A method of evaluating positioning accuracy of a magnetic head tester that tests a performance of a magnetic head by carrying out write and read operations on a magnetic medium using a magnetic head that is a tested product, comprising steps of:

acquiring a plurality of GAPS profiles by repeatedly carrying out a GAPS test that measures a GAP offset amount for a same magnetic head that has been attached to the magnetic head tester; and

calculating a write core width fluctuation amount from the acquired plurality of GAPS profiles and setting a calculation result thereof as an index for evaluating a linearity accuracy for the magnetic head tester,

wherein the write core width fluctuation amount is equal to a write core width maximum value minus a write core width minimum value.

Claim 3 (Previously Presented): A method of evaluating positioning accuracy of a magnetic head tester that tests a performance of a magnetic head by carrying out write and read operations on a magnetic medium using a magnetic head that is a tested product, comprising steps of:

acquiring a GAPS profile by carrying out a GAPS test that measures a GAP offset amount for a same magnetic head that has been attached to the magnetic head tester;

calculating a 50% position sensitivity in a vicinity of a position with 50% of a peak value in the acquired GAPS profile, moving the magnetic head to a 50% position in the GAPS profile and measuring an output level during an arbitrary time period at a moved-to position;

calculating a 50% position fluctuation amount from a fluctuation amount in the output level and the 50% position sensitivity; and

setting a calculation result as an index of positional stability of the magnetic head,

wherein the 50% position sensitivity is equal to (a second track position minus a first track position) divided by (a second output level minus a first output level).

Claim 4 (Previously Presented): A method of evaluating positioning accuracy of a magnetic head tester that tests a performance of a magnetic head by carrying out write and read operations on a magnetic medium using a magnetic head that is a tested product, comprising steps of:

acquiring a GAPS profile by carrying out a GAPS test that measures a GAP offset amount for a same magnetic head that has been attached to the magnetic head tester;

calculating a 50% position sensitivity in a vicinity of a position with 50% of a peak value in the acquired GAPS profile, moving the magnetic head to a 50% position in the GAPS profile, measuring an output level, moving the magnetic head to an arbitrary position, and moving the magnetic head back to the 50% position and remeasuring the output level;

calculating a 50% position fluctuation amount from a fluctuation amount in the output level and the 50% position sensitivity; and

setting a calculation result as an index of positional stability of the magnetic head,

wherein the 50% position fluctuation amount is equal to (a maximum output level minus a minimum output level) times the 50% position sensitivity.